Caitlin McMahon

One Broadway, 14th Floor, Cambridge, MA 02142
caitlin.mcmahon@ethree.com

ENERGY AND ENVIRONMENTAL ECONOMICS, INC. Boston, MA
Associate

Caitlin McMahon joined E3 in 2022 and will support E3's work in distributed energy resources. Prior to E3, Ms. McMahon completed research at Stanford while earning a master's degree in Energy Resources Engineering. Her research focused on enhancing demand response in commercial buildings. She created data analytic tools and statistical models for processing experimental data from integrated campus HVAC systems, uncovering hidden inefficiencies, and maximizing system flexibility for demand response. She previously interned in the Grid Modernization group at National Grid where she estimated available hosting capacity for distributed generation and performed protection engineering studies. In the Electrical Engineering department at the New York Power Authority, Ms. McMahon managed projects through design, procurement, print management, regulatory review, and field implementation oversight. In addition to her M.S., Ms. McMahon holds a B.S. in Electrical Engineering from Union College.

STANFORD UNIVERSITY Stanford, CA
Researcher, Cooler Project, Sally Benson September 2020 – June 2022

- Created data analytic tools and statistical models processing one billion data points from 1,000 integrated pieces of campus HVAC equipment, uncovering hidden inefficiencies in the buildings and maximizing system flexibility for demand response
- Led experimentation demonstrating load reductions of 5-29 percent on campus
- Co-managed and improved custom software which: communicated with buildings through Haystack servers in JSON via Skyspark, ran experiments in CLI and tmux on VM, logged errors, processed results in Python, and published results on web-based dashboards
- Produced overview visuals for energy staff and detailed visuals for academic journals
- Collaborated within small team and with stakeholders, including leading meetings with investors and troubleshooting with building managers

NATIONAL GRID Albany, NY
Grid Modernization Intern June 2019 – December 2020

- Utilized PI Datalink and excel to extract feeder performance data and create load profiles
- Identified spot loads by analyzing transformer actual versus rated current and voltage
- Troubleshooted faults under worst-case conditions in Operations Management System
- Coordinated fuse sizing according to standards and load analysis on CYME software
- Calculated available hosting capacity for distributed generation without significant cost upgrades based on recloser supervisory capabilities

NEW YORK POWER AUTHORITY Massena, NY
Developmental Intern June 2017 – August 2018

- Managed electrical engineering and controls projects through design, procurement, scheduling, print management, regulatory review, field implementation oversight
- Analyzed faulty transformer's Dissolved Gas Analysis results and presented action plan

Education

Stanford University — Stanford, CA
M.S., Energy Resources Engineering — June 2022

Union College — Schenectady, NY
B.S., Electrical Engineering — June 2020